

Abstract Compendium



*Mastering gender in research
performance, contexts, and outcomes*

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STEM: what should be taught in school?

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STEM disciplines are considered fundamental for countries' competitiveness on a global scale, and moreover characteristics and skills owned by a STEM graduate are invaluable not only in STEM job places but for employers in any other field. This is why there is such an interest and benefit for the society as a whole to increase the number of students pursuing STEM subjects, with an eye to the inclusion of under-represented groups, such as women.

As female participation in Higher Education exceeds that of men in several parts of the world, women remain an untapped resource for science and innovation (OECD, 2006:18). A great deal of what should be taught in school in relation to STEM has been the focus of many debates, but little research has been done in this regard. This study aims to investigate the role of education in engaging students (with a comparison between male and female students) in STEM subjects in the classroom. What is the role of education, how can we motivate students to embark and remain in a scientific career field?

1. Relevance

A lack of students who choose STEM careers is detrimental for the economy particularly in this moment in time, as STEM disciplines are seen as fundamental for countries' economies, to increase global competitiveness. For this reason, increasing participation of people - with a specific eye on improving the gender balance and the inclusion of under-represented groups - in STEM is high on governments' agendas, both at national level and at European level.

2. Aims & Objectives

Aim of this project is to provide a basis for teachers and educators to help understanding how to best teach STEM subjects in school to engage with male and female students, and secondly how to tackle and overcome the question of gender conscious and unconscious biases in the classroom, with the intention to help them motivate and attract female students in STEM fields.

3. Methods

This study uses a narrative inquiry methodology through the means of unstructured interviews and focus groups, to pull out elements from the participants' life history to understand how STEM education taught in school has had an impact on their career choices. This study is based on grounded theory.

4. Results

The research is in a very early stage; thematic analysis on interviews and data collected is currently been performed to find common patterns of what aspects of STEM education in the classroom have worked for them and what hasn't worked.

5. Conclusions

The aim is to provide a solid basis for change in STEM education in England, proving that STEM education as it is currently taught is failing to attract students towards subjects such as Maths, or Engineering, and to help students choose and persist in a STEM career.

References

- [1] OECD, *Women in Scientific Careers: Unleashing the Potential*, OECD Publishing, Paris: 2006